TRANSMITTAL O	MENT Docket No. 13414 (NECI1083)		
In Re Application Of: A. Peter Blicher et al.			
Serial No.	Filing Date Exa	miner Group Art Unit	
09/538,209	March 30, 2000 Unas	signed Unassigned	
Title: METHOD FOR MATCHING A TWO DIMENSIONAL IMAGE TO ONE OF A PLURALITY OF THREE			
DIMENSIONAL CANDIDATE MODELS CONTAINED IN DATABASE			
Address to: Assistant Commissioner for Patents Washington, D.C. 20231			
37 CFR 1.97(b)			
1. It Information Disclosure Statement submitted herewith is being filed within three months of the filing of a national application; within three months of the date of entry of the national stage as set forth in 37 CFR 1.491 in an international application; or before the mailing date of a first Office Action on the merits, whichever event occurs last.			
37 CFR 1.97(c)			
2. The Information Disclosure Statement submitted herewith is being filed after three months of the filing of a national application, or the date of entry of the national stage as set forth in 37 CFR 1.491 in an international application; or after the mailing date of a first Office Action on the merits, whichever occurred last but before the mailing date of either:			
1.	a Final Action under 37 CFR 1.113, or		
2.	a Notice of Allowance under 37 CFR 1.311,		
whiche	ever occurs first.		
Also submitted herewith is:			
☐ a certific	eation as specified in 37 CFR 1.97(e);		
	OR		
	set forth in 37 CFR 1.17(p) for submission of an CFR 1.97(c).	Information Disclosure Statement	

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TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT (Under 37 CFR 1.97(b) or 1.97(c))	Docket No. 13414 (NECI1083)			
In Re Application Of: A. Peter Blicher et al.				
Serial No. Filing Date Examiner 09/538,209 March 30, 2000 Unassigned	Group Art Unit Unassigned			
Title: METHOD FOR MATCHING A TWO DIMENSIONAL IMAGE TO ONE OF A PLURALITY OF THREE DIMENSIONAL CANDIDATE MODELS CONTAINED IN DATABASE				
Payment of Fee (Only complete if Applicant elects to pay the fee set forth in 37 CFR 1.17(p))				
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Thomas Spinelli Registration No. 39,533				
Scully, Scott, Murphy & Presser 400 Garden City Plaza Garden City, New York 11530 (516) 742-4343 cc:				

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: A. Peter Blicher, et al. Examiner: Unassigned

Serial No.: 09/538,209 Art Unit: Unassigned

Filed: March 30, 2000

Docket: 13414 (NECI1083)

For: METHOD FOR MATCHING A TWO

DIMENSIONAL IMAGE TO ONE OF A PLURALITY OF THREE DIMENSIONAL CANDIDATE MODELS CONTAINED IN A

DATABASE

Assistant Commissioner for Patents Washington, D.C. 20231



INFORMATION DISCLOSURE STATEMENT

Sir:

In accordance with 37 C.F.R. §§ 1.97 and 1.98, it is requested that the following references, which are also listed on the attached Form PTO-1449, be made of record in the above-identified case.

- P.N. Belhumeur et al., "What Is the Set of Images of an Object under All Possible Illumination Conditions?", International Journal of Computer Vision, 1998, pp. 1-16;
- 2. P.N. Belhumuer et al., "The Bas-Relief Ambiguity", In the Proceedings of CVPR97;
- 3. P.N. Belhumeur et al., "Comparing Images Under Variable Illumination", To appear in the Proceedings of CVPR98;

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner of Patents and Trademarks, Washington, D.C. 20231 on April 20, 2000.

Dated: April 20, 2000

Mishelle Spina

- 4. R.A. Brooks, "Symbolic Reasoning Among 3-D Models and 2-D Images", Artificial Intelligence 17, 1981, pp. 285-345;
- 5. R.A. Brooks, "Model-Based Three-Dimensional Interpretations of Two-Dimensional Images", IEEE Transactions on Pattern Analysis and Machine Intelligence, 1983, pp. 140-150;
- 6. R.A. Brooks et al., "The AGRONYM Model-Based Vision System", Proceedings of the Sixth International Joint Conference on Artificial Intelligence, 1979, pp. 105-113;
- 7. P. Dupuis et al., "Direct Method For Reconstructing Shape From Shading", IEEE 1992, pp. 453-458;
- 8. P. Dupuis et al., "Direct Method for Reconstructing Shape From Shading", DARPA Image Understand, 1992, pp. 563-571;
- 9. J. Oliensis et al., "Direct method for reconstructing shape from shading", SPIE, 1991, pp. 116-128;
- 10. A.S. Georghiades et al., "Illumination Cones for Recognition Under Variable Lighting: Faces", To appear in the Proceedings of CVPR98;
- 11. W.E.L. Grimson et al., "On the Verification of Hypothesized Matches in Model-Based Recognition", IEEE Transactions on Pattern Analysis and Machine Intelligence, 1991, pp. 1201-1213;
- 12. B.K.P. Horn, "Understanding Image Intensities", Artificial Intelligence 8, 1977, pp. 201-231;
- 13. B.K.P. Horn et al., "Calculating the reflectance map", Applied Optics, 1979, pp. 1770-1779;
- 14. B.K.P. Horn, "Hill-Shading and the Reflectance Map", Proceedings of the IEEE, Vol. 69, 1981, pp. 14-47;
- 15. B.K.P. Horn, "Hill-Shading and the Reflectance Map", Artificial Intelligence Laboratory, pp. 79-120;
- D.P. Huttenlocher et al., "Object Recognition Using Alignment", DARPA Image Understanding Workshop, 1987, pp. 370-379;
- 17. D.P. Huttenlocher et al., "Object Recognition Using Alignment", IEEE, 1987, pp. 102-111;

- 18. D.P. Huttenlocher et al., "Recognizing Solid Objects by Alignment with an Image", International Journal of Computer Vision, 1990, pp. 195-212;
- 19. D.P. Huttenlocher et al., "Recognizing Solid Objects by Alignment", DARPA Image Understanding Workshop, 1998, pp. 1114-1122;
- 20. M. Kirby et al., "Application of the Karhunen-Loeve Procedure for the Characterization of Human Faces", IEEE, 1990, pp. 103-108;
- 21. J.J. Koenderink et al., "Photometric invariants related to solid shape", OPTICA ACTA, 1980, pp. 981-996;
- D.G. Lowe, "Fitting Parameterized Three-Dimensional Models to Images", IEEE Transactions on Pattern Analysis and Machine Intelligence", 1991, pp. 441-450;
- 23. D.G. Lowe, "Visual Recognition From Spatial Correspondence And Perceptual Organization", pp. 953-959;
- 24. D.G. Lowe, "Three-Dimensional Object Recognition from Single Two-Dimensional Images", 1987, pp. 355-395;
- 25. J. Olienis et al., "A Global Algorithm for Shape from Shading", IEEE, 1993, pp. 692-701;
- 26. J. Olienis et al., "Provably Convergent Algorithms for Shape from Shading", Image Understanding Workshop, 1993, pp. 1121-1130;
- 27. J. Olienis, "Shape from Shading as a Partially Well-Constrained Problem", CVGIP 1991, pp. 163-183;
- 28. J. Olienis, "Shape from Shading as a Partially Well-Constrained Problem", IEEE, 1991, pp. 559-564;
- 29. J. Olienis, "New Results In Shape From Shading", Image Understanding Workshop, 1990, pp. 145-153;
- 30. J. Olienis, "Uniqueness in Shape from Shading", International Journal of Computer Vision, 1991, pp. 75-104;
- 31. J. Olienis, "Existence and Uniqueness in Shape from Shading", IEEE, 1990, pp. 341-345;
- 32. P.S. Penev, "Local Feature Analysis: A general statistical theory for object representation", 1996, pp. 1-27;

- 33. L.G. Roberts, "Machine Perception of Three-Dimensional Solids", Massachusetts Institute of Technology Lincoln Laboratory, Technical Report No. 315, 1965, pp. 1-40;
- 34. A. Shashua, "Geometry and Photometry in 3D Visual Recognition", Massachusetts Institute of Technology, 1992, pp. 1-165;
- 35. L. Sirovich et al., "Low-dimensional procedure for the characterization of human faces", Optical Society of America, 1987, pp. 519-524;
- 36. M.A. Turk et al., "Face Recognition Using Eigenfaces", IEEE, 1991, pp. 586-591;
- 37. S. Ullman et al., "Recognition by Linear Combinations of Models", IEEE, 1991, pp. 992-1006;
- 38. T. Vetter, "Synthesis of novel views from a single face image", Max-Planck-Institute Technical Report No. 26, 1996, pp. 1-13;
- 39. T. Vetter et al., "Estimating Coloured 3D Face Models from Single Images: An Example Based Approach", European Conference on Computer Vision Vol. 2, pp. 499-512;
- 40. P. Viola et al., "Alignment by Maximization of Mutual Information", To appear at the International Conference on Computer Vision, 1995;
- 41. L. Wiskott et al., "Face Recognition by Elastic Bunch Graph Matching", IEEE Transactions on Pattern Analysis and Machine Intelligence, Vol. 19, 1997, pp. 775-779;
- 42. P.H. Winston, "Obtaining Shape From Shading Information", The Psychology of Computer Vision, pp. 115-155;
- 43. B.K.P. Horn et al., "Calculating The Reflectance Map", Artificial Intelligence Laboratory, pp. 115-126;
- 44. M. Turk et al., "Eigenfaces for Recognition:, Journal of Cognitive Neurosocience, Volume 3, Number 1, 1991, pp. 71-86;
- 45. C.F. Olsen, "Fast Object Recognition by Selectively Examining Hypotheses", Dissertation submitted to University of California, 1994, pp. 1-136;

- 46. S. Ullman, "High-level Vision Object Recognition and Visual Cognition", Approaches to Object Recognition, pp. 31-213;
- 47. T. Alter et al., "Uncertainty Propagation in Model-Based Recognition", International Journal of Computer Vision, 1998, pp. 127-159;
- 48. Y. Hel-Or et al., "Pose Estimation by Fusing Noisy Data of Different Dimensions", IEEE, 1995, pp. 195-201;
- 49. R.M. Haralick et al., "Analysis and Solutions of The Three Point Perspective Pose Estimation Problem", IEEE 1991, pp. 592-598;
- 50. R. Horaud, "New Methods for Matching 3-D Objects with Single Perspective Views", IEEE, 1987, pp. 401-412;
- 51. D.P. Huttenlocher, "Three-Dimensional Recognition of Solid Objects from a Two-Dimensional Image", MIT Artificial Laboratory, Technical Report 1045, 1988, pp. 1-161;
- 52. D.P. Huttenlocher et al., "Object Recognition Using Alignment", IEEE, 1987, pp. 102-111;
- 53. R. Zurmuhl, "Praktische Mathematik", Springer-Verlag, 1965, pp. 60-65;
- 54. M.A. Fischler et al., "Random Sample Consensus: A Paradigm for Model Fitting with Application to Image Analysis and Automated Cartography", SRI International 1981, pp. 381-395;
- 55. D.P. Huttenlocher et al., "Recognizing Solid Objects by Alignment with an Image", International Journal of Computer Vision, 1990, pp. 195-212;
- 56. A.R. Brooks, "Symbolic Reasoning Among 3-D Models and 2-D Images", Dissertation 1981, pp. 1-172;
- 57. B.K.P. Horn, "Shape From Shading; A Method for Obtaining the Shape of a Smooth Opaque Object from one View", Massachusetts Institute of Technology, 1970, pp. 1-197;

Applicants are submitting copies of the above-cited references.

Insmuch as this Information Disclosure Statement is being submitted in accordance with the schedule set out in 37 C.F.R. § 1.97(b), no petition, certification or fee is required.

Respectfully submitted,

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TS:cm